



PROTECT +
ENHANCE +
SAVE LIVES

Ion Beam Applications

Capital Markets Day

Monday 26th September 2016

Olivier Legrain & IBA Management Team
investorrelations@iba-group.com



Disclaimer

This presentation may contain forward-looking statements concerning industry outlook, including growth drivers; the company's future orders, revenues, backlog, or earnings growth; future financial results; market acceptance of or transition to new products or technology and any statements using the terms "could," "believe," "outlook," or similar statements are forward-looking statements that involve risks and uncertainties that could cause the company's actual results to differ materially from those anticipated.

The company assumes no obligation to update or revise the forward-looking statements in this release because of new information, future events, or otherwise.

- Business and strategy update
- Dosimetry at a glance
- The Future of Proton Beam Radiotherapy
- North America update
- Guidance



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SAVE LIVES

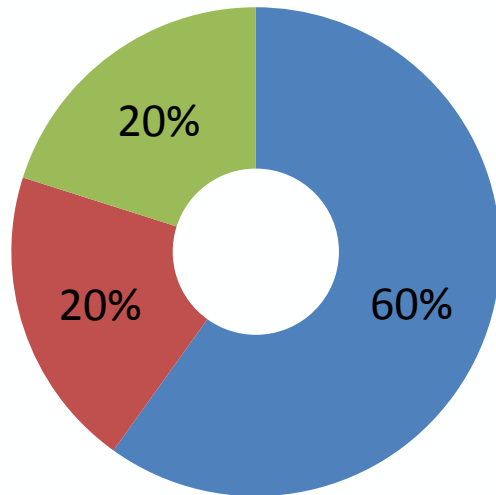
Business and Strategy Update

Monday 26th September 2016

Olivier Legrain (CEO)
investorrelations@iba-group.com



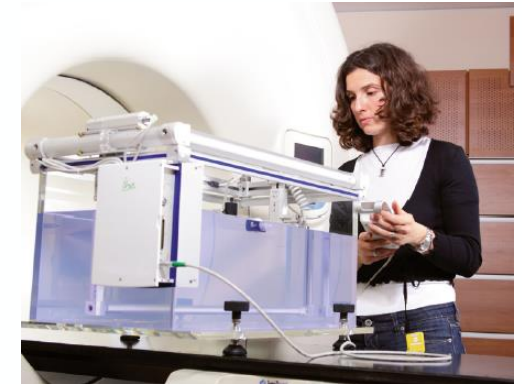
- IBA is a worldwide technology leader in the field of proton therapy
 - Most advanced form of cancer treatment with radiation therapy today
 - Complete offering (Proteus[®]PLUS and Proteus[®]ONE)
- Global leader in dosimetry and particle accelerators
- Three activities with significant market share :



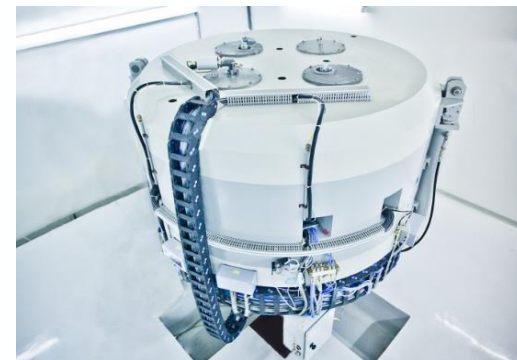
- - Proton therapy
- - Dosimetry
- - Other Accelerators



Proton Therapy

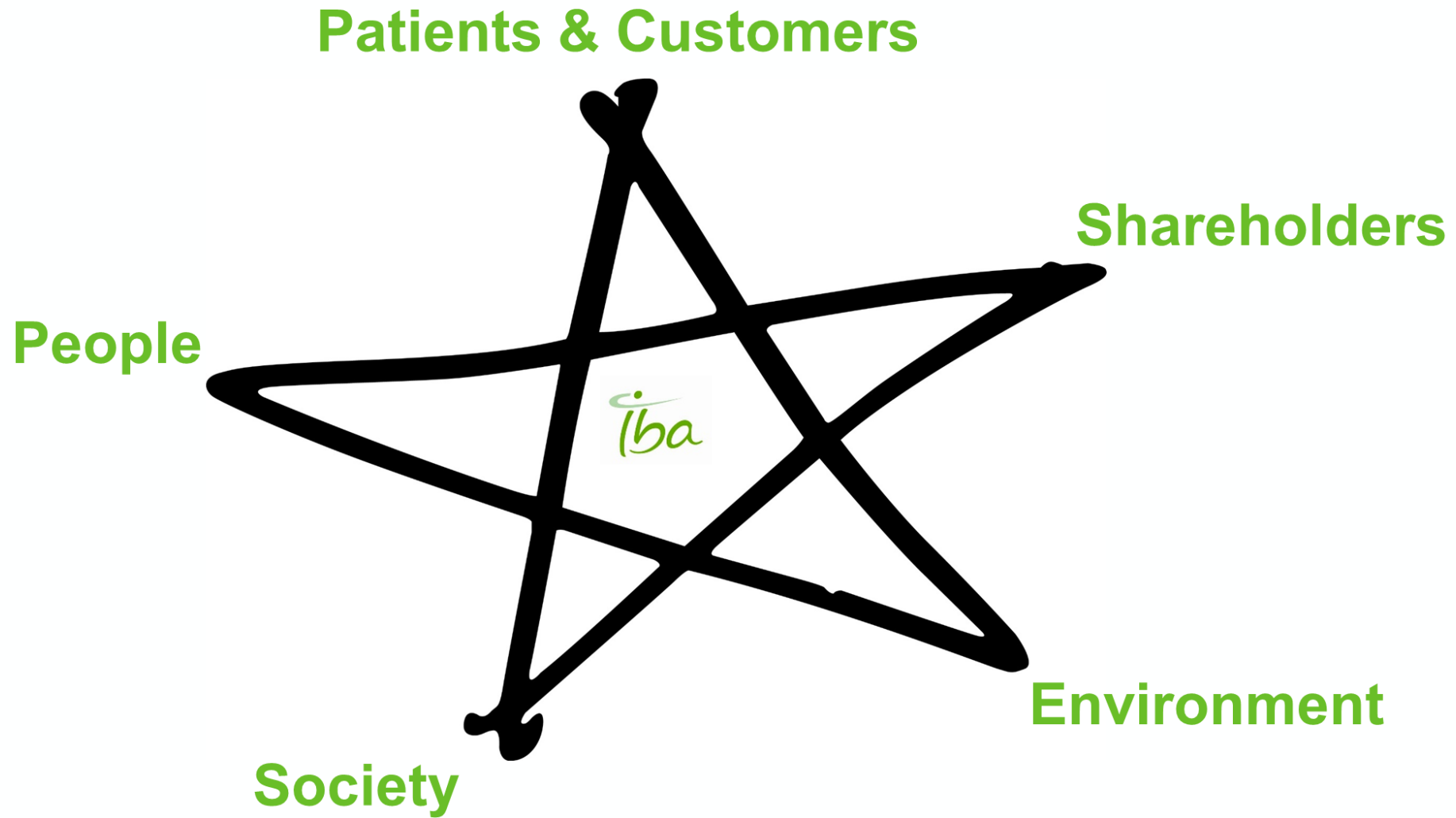


Dosimetry



Other accelerators
(RadioPharma Solutions and Industrial)





Reshaping IBA Culture

New Culture

- 2-day session where 250 managers learned to concretely change their thinking and behavior
- 14 culture concepts identified as key in shifting our culture discussed each month with the teams
- We are global



USA



Belgium



China



Czech Republic



Germany



Expansion Strategy and CAPEX



- Recruitment – 400 engineers and related staff to increase headcount from 1,200 to 1,600 in the next 12 months – 50% in Belgium, remainder in the USA, Europe and Asia
 - 206 already identified
- CAPEX – scale-up program to increase capacity including investment in production (new Proteus[®]ONE assembly line) & marketing infrastructure (customer center) of EUR 15 million over 2 years

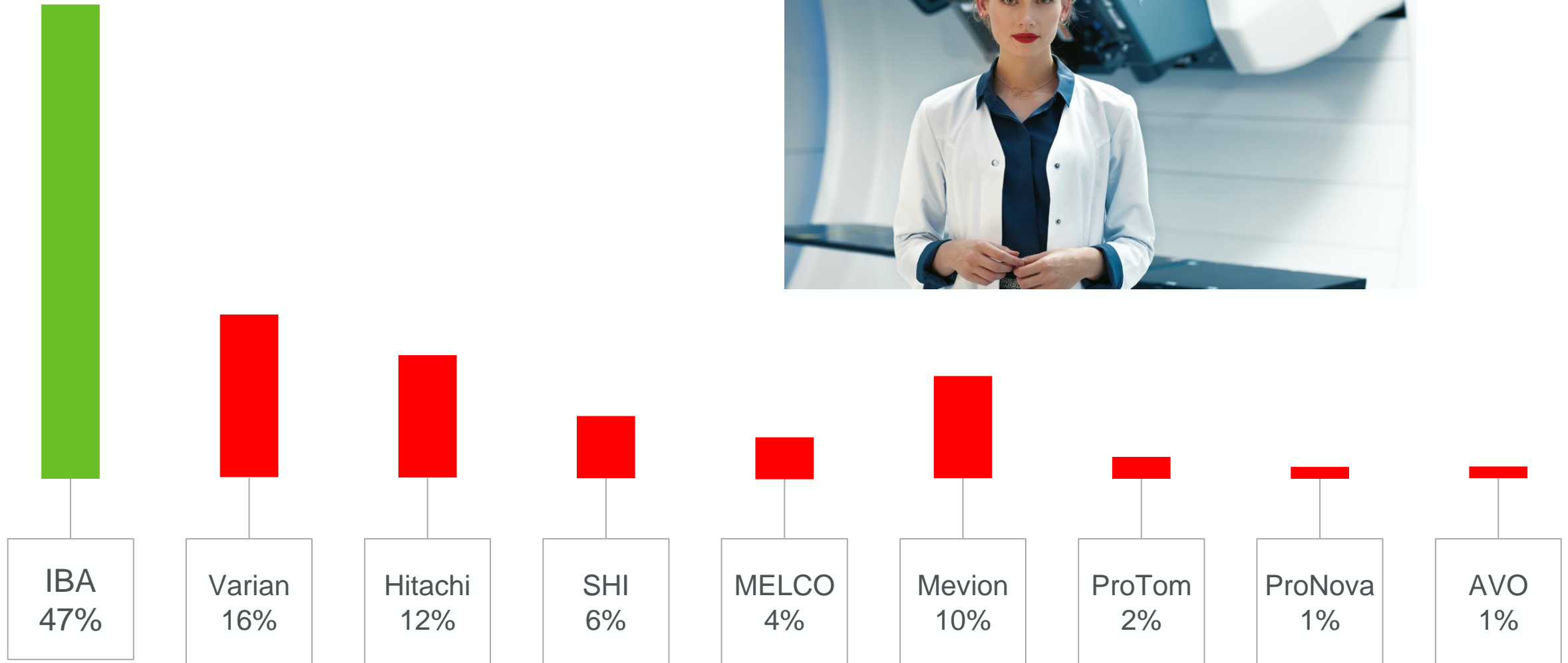


Vue d'artiste non contractuelle. Sous réserve d'obtention des autorisations urbanistiques

New assembly line

Leading the install base - Market shares in systems

Total: 93 centers



Leading the install base - Market shares in rooms



Total: 235 rooms

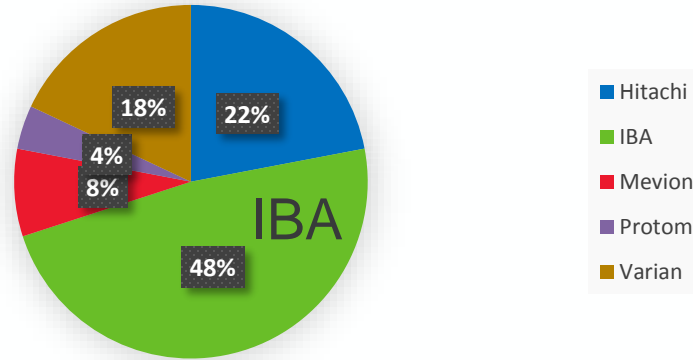


Market shares in rooms by geography

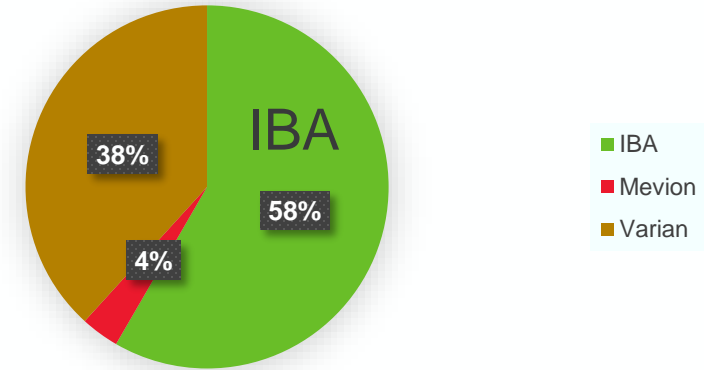


Rooms
(YTD)

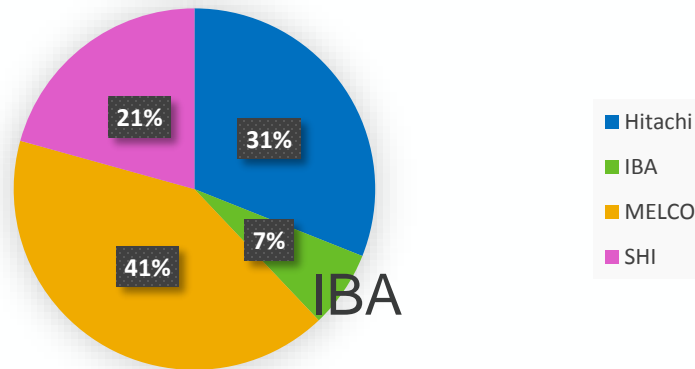
Number of rooms US



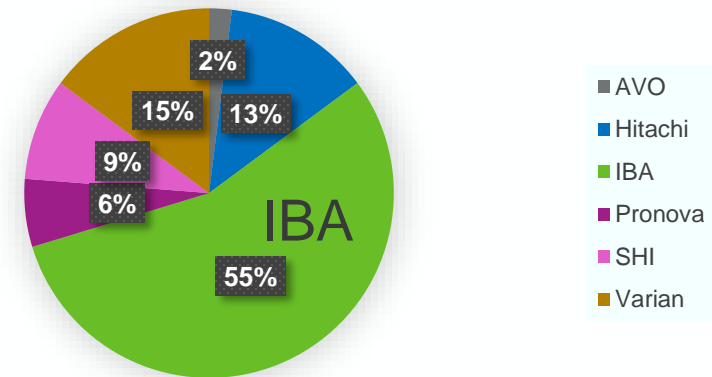
Number of rooms EMEA + ROW



Number of rooms Japan



Number of rooms - Rest of APAC



DRIVERS FOR GROWTH

Growing recognition of proton therapy clinical advantages



PERSPECTIVE ON RADIATION THERAPY PATIENTS RECEIVING PROTON THERAPY AS PART OF THEIR TREATMENT

1%

Today

20%

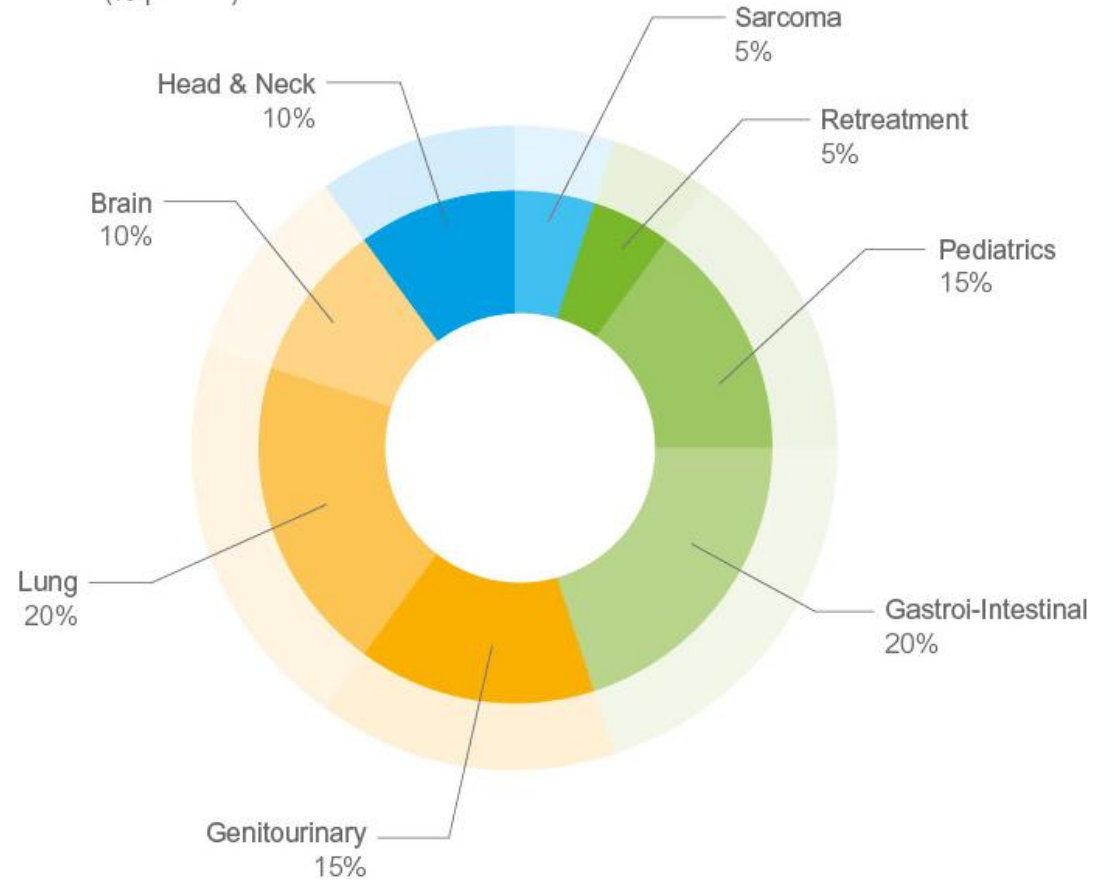
Following reports & policies

45%

Following clients' experiences



Proton Therapy Typical Cancer Indication Mix
(% patients)

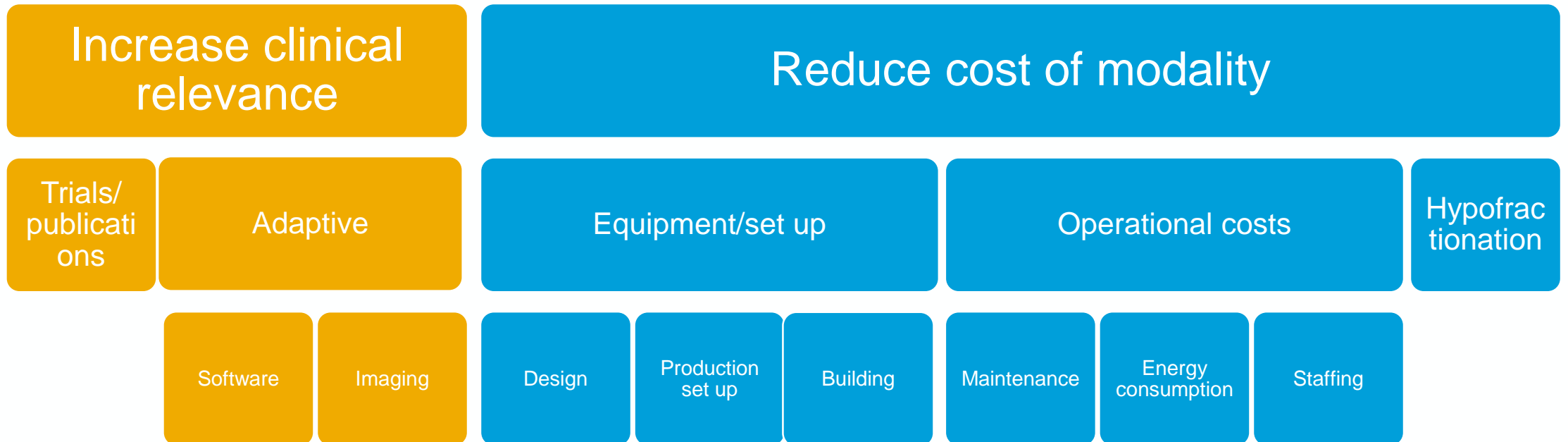


Oct. 2015 data from a leading center in the US

Grow market from 1% to 20% or more

Maintain or improve market share

Grow market from 1% to 20% or more



Maintain or improve market share

Go to market

Leverage on other IBA expertises

Partnerships

Regionalization

Dosimetry

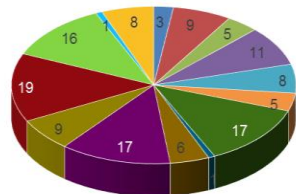
Other Accelerators

Increasing clinical relevance of proton therapy



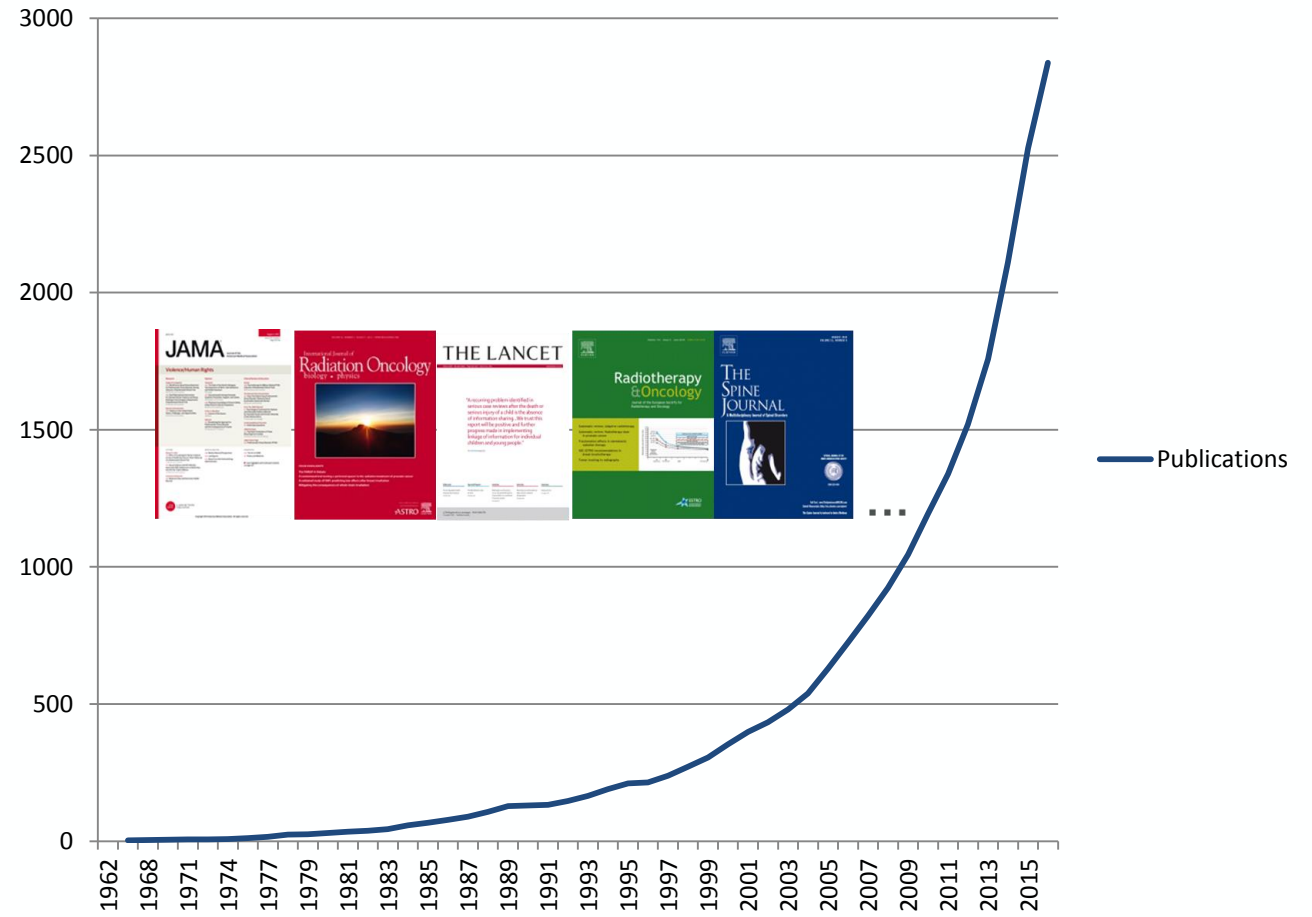
- IBA strategy
 - Support Focus groups
 - Pediatric
 - Lung
 - Head & Neck
 - Radio-biologic effect
 - Publish White Papers
 - PT in Oncology
 - Treating pediatric tumors with PT
 - + GI, H&N and Hodgkin Lymphoma

Ongoing clinical trial Total 135



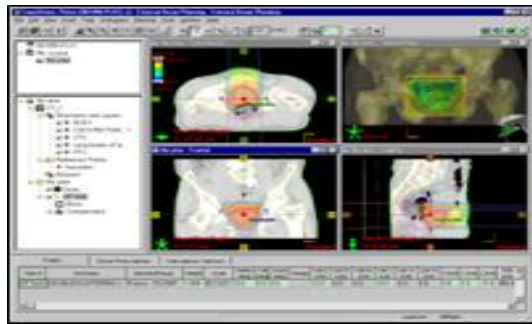
- ocular
- head and neck
- spine
- liver
- pancreas
- esophagus, anal
- prostate
- uterus, cervix
- bone soft tissues
- lung
- breast
- brain, CNS, skullbase
- pediatric
- lymphoma, hodgkins
- others

Cumulative number of PT publications



- Integration
- Workflow
- Adaptive
- Imaging
- Cost

TPS/OIS: Open Vendor Strategy
(freedom to choose according to your need)



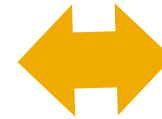
Treatment Planning

- Xio (Elekta) : 12 centers
- Eclipse (Varian) : 7 centers
- RayStation (Raysearch) : 17 centers
- Pinnacle*(Philips) : 4 sites



Oncology Information System

- Mosaiq (Elekta) : 20 centers
- Aria (Varian) : 3 centers
- RayCare (Raysearch): In development



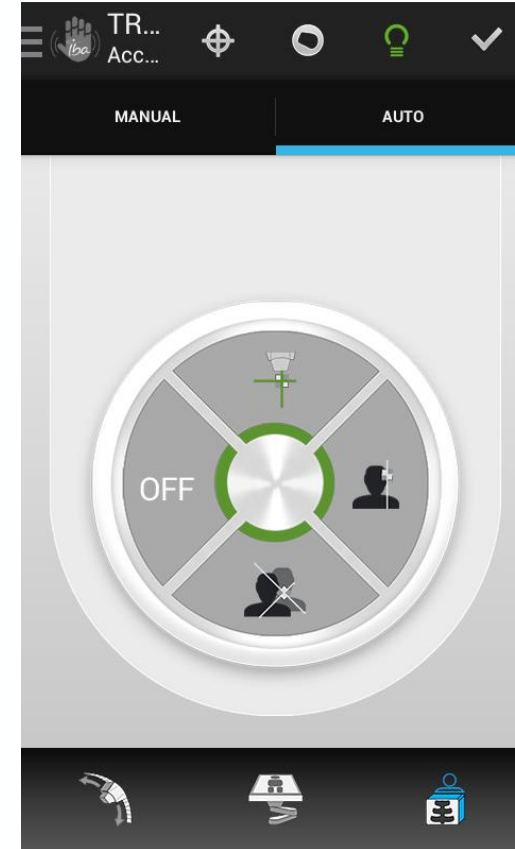
Proton Treatment delivery System

- IBA

Patient throughput – integration - efficiency



WIRELESS

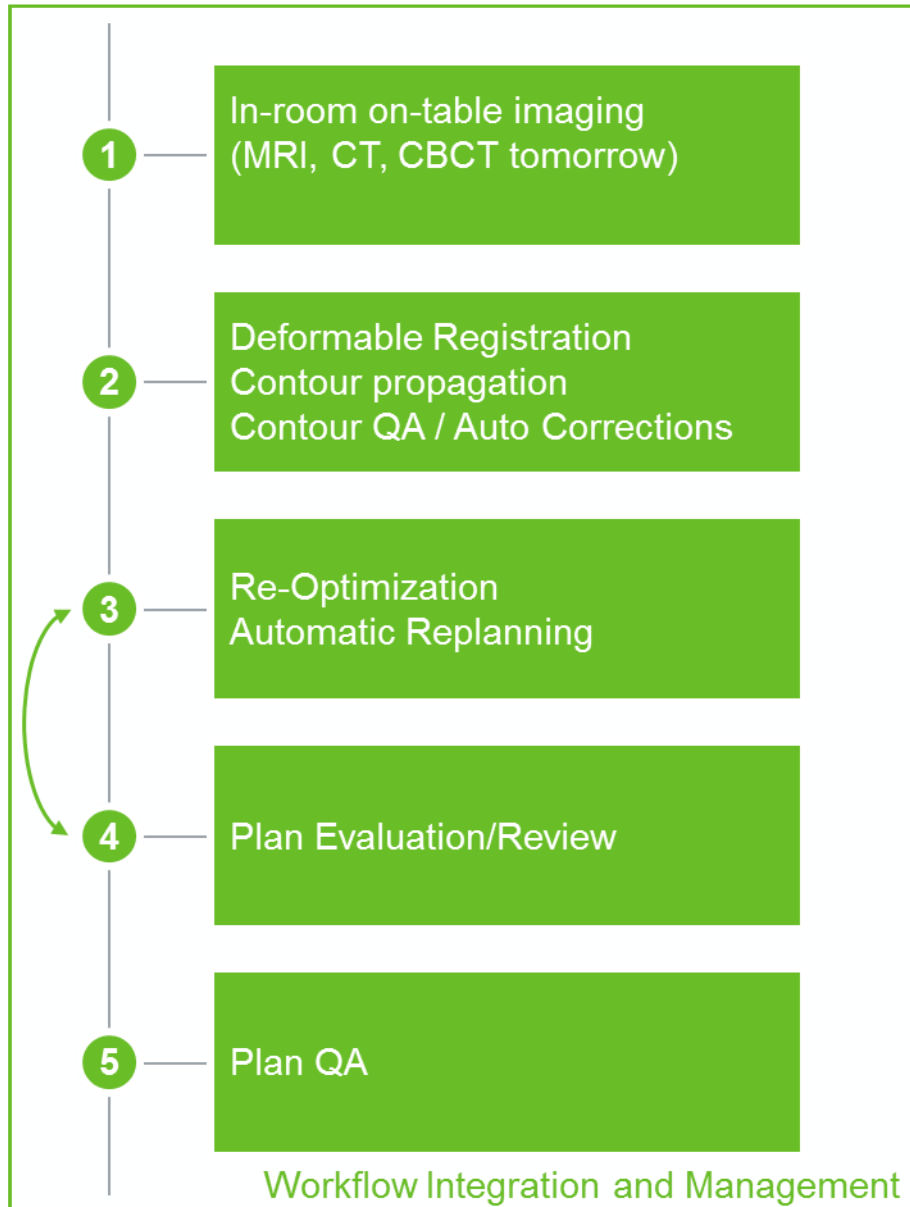


SMART

And more... with Philips Ambient experience



Focus on Online Adaptive Workflow



In-Room imaging

Strategic partnerships in adaptive therapy



PHILIPS

Step up collaboration in adaptive proton therapy planning to advance personalized cancer care

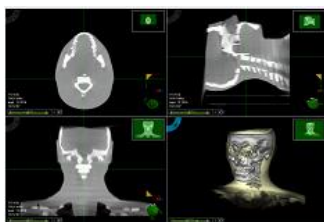
Joint offering of unique proton therapy solutions



Next generation proton therapy planning to further increased efficiencies in the patient treatment workflow



Ambient Experience

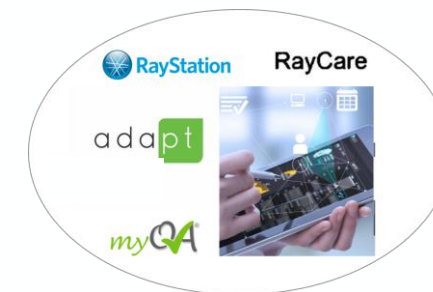


Enhanced Cone Beam CT imaging technology

By combining expertise in image guidance, software planning and therapy



New alliance to offer a unique integrated comprehensive solution for adaptive proton therapy



NEXT PLATFORM GENERATION

- ✓ Seamless integration of RayCare and RayStation with IBA delivery solutions
- ✓ Optimal workflows
- ✓ Optimized functionalities for proton therapy
- ✓ Treatment adaptation
- ✓ Better operationability
- ✓ Integrated user interface

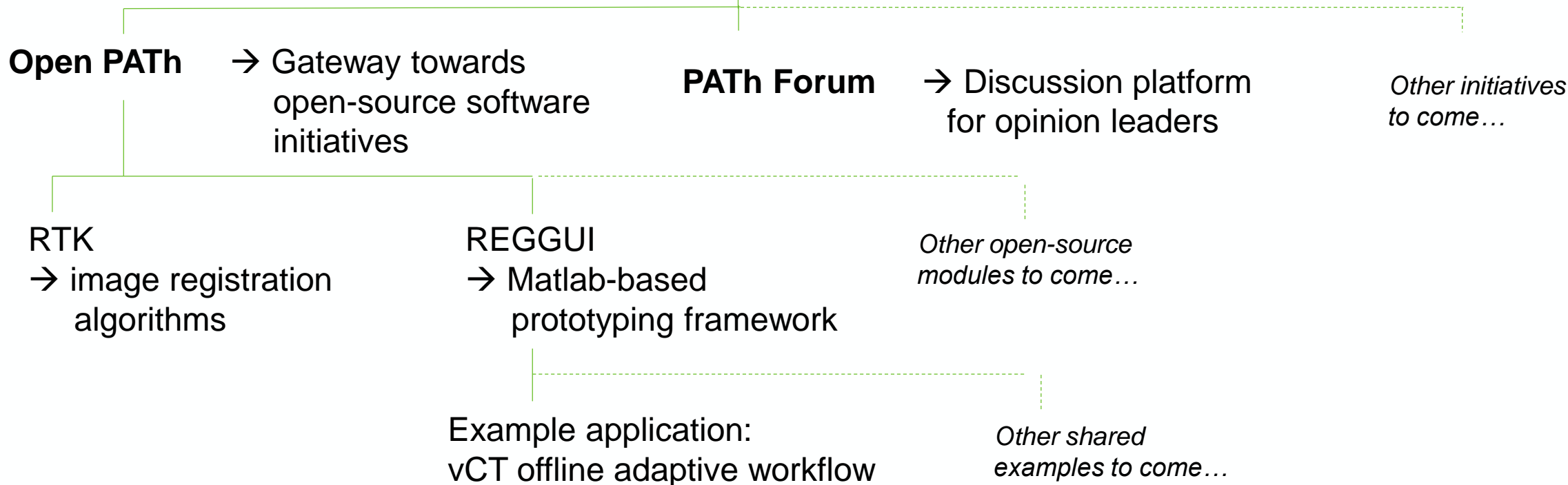
To realize the full potential of proton therapy

Adaptive Therapy - Open innovative program



PATH → Open innovation program,
focused on **Proton Adaptive Therapy**

Leading the PATH
Launch campaign
+ landing website (.org)



Adaptive therapy : CBCT and In-Room CT

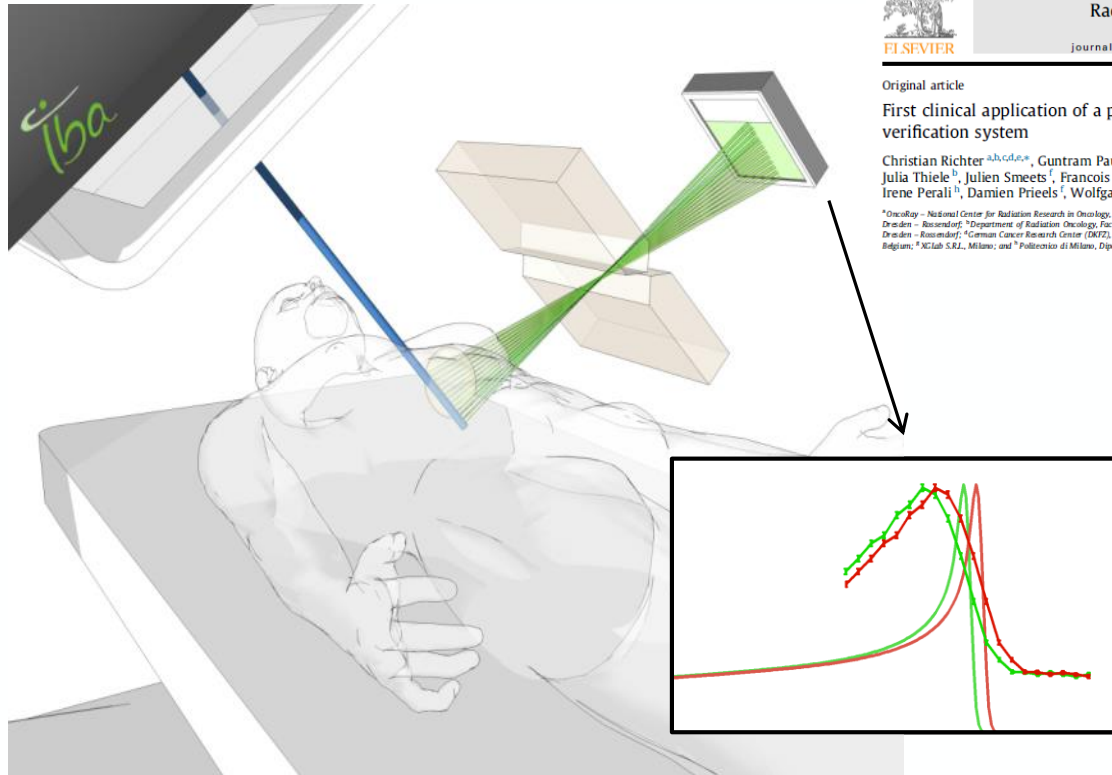


CBCT Penn Medicine, USA

In-Room CT, Trento, Italy



Adaptive therapy – real time monitoring



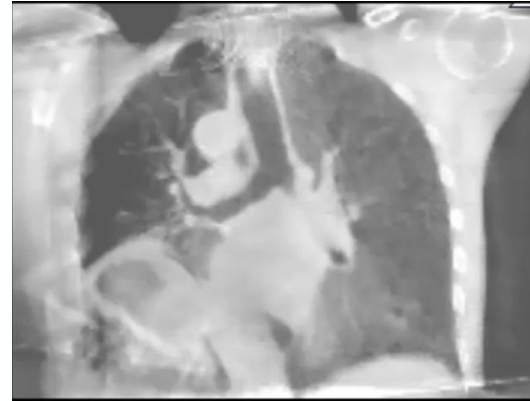
Original article
First clinical application of a prompt gamma based *in vivo* proton range verification system
Christian Richter^{a,b,c,d,e,*}, Guntram Pausch^{a,b,c}, Steffen Barczyk^{a,b}, Marlen Priegnitz^c, Isabell Keitz^a, Julia Thiele^b, Julien Smeets^f, Francois Vander Stappen^f, Luca Bombelli^g, Carlo Fiorini^h, Lucian Hotoiuⁱ, Irene Perali^h, Damien Prieels^f, Wolfgang Enghardt^{a,b,c,d,e}, Michael Baumann^{a,b,c,d,e}

*OncoRay – National Center for Radiation Research in Oncology, Faculty of Medicine and University Hospital Carl Gustav Carus, Technische Universität Dresden, Helmholtz-Zentrum Dresden – Rossendorf; ^aDepartment of Radiation Oncology, Faculty of Medicine and University Hospital Carl Gustav Carus, Technische Universität Dresden, Helmholtz-Zentrum Dresden – Rossendorf; ^bGerman Cancer Research Center (DKFZ), Heidelberg; ^cGerman Cancer Consortium (DKTK), Dresden, Germany; ^dIon Beam Applications SA, Louvain-la-Neuve, Belgium; ^eXCLab S.R.L., Milano; and ^fPolitecnico di Milano, Dipartimento di Elettronica, Informazione e Biogenetica, Italy



Two prototypes in clinical use: Europe and USA

Organ motion management



Planning optimization



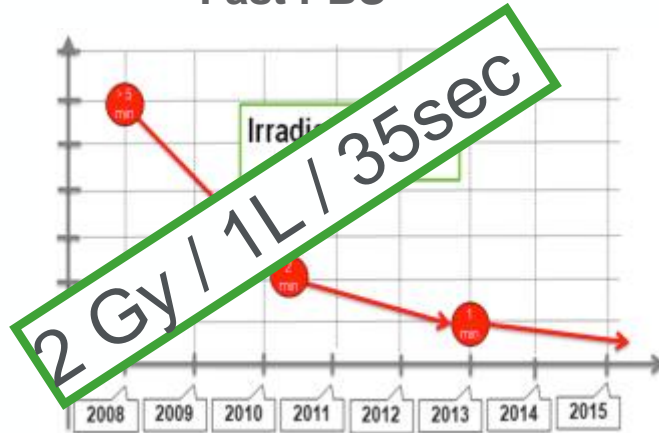
4D CBCT



Breath-hold (<10s)



Fast PBS



Repainting



Dual Spot Size



Gating Interface

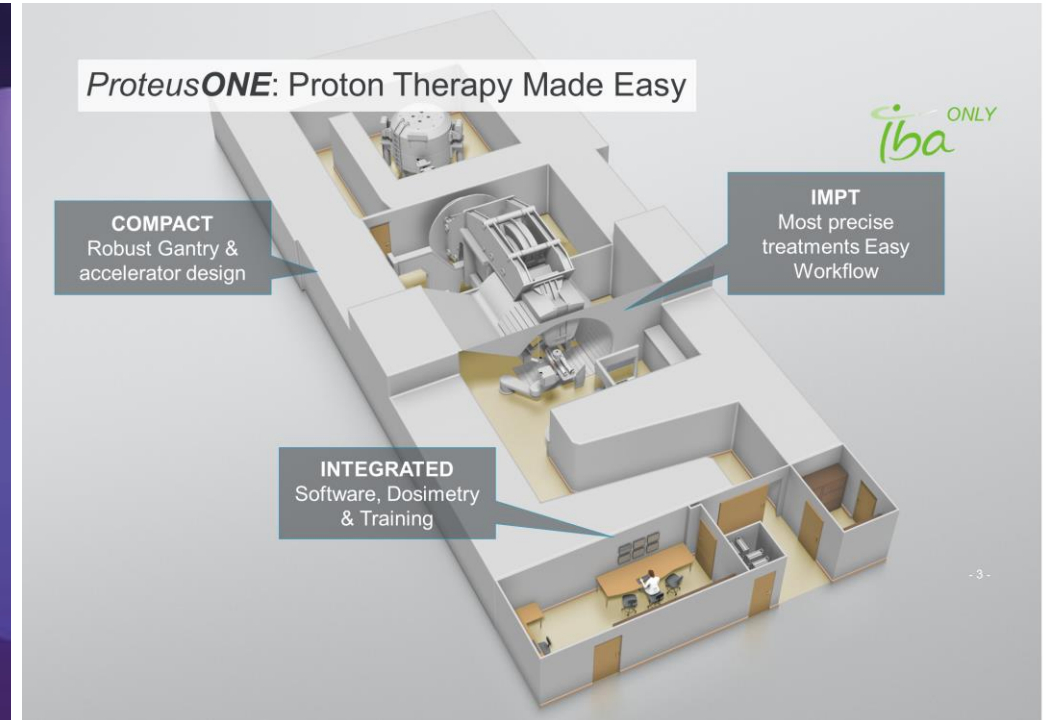
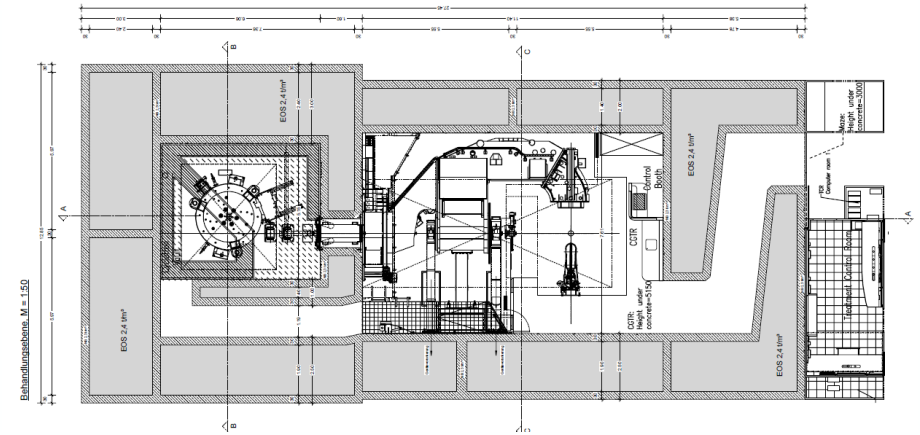


Several centers start to treat moving tumors with PBS

Reduce cost of the set up

■ Proteus One

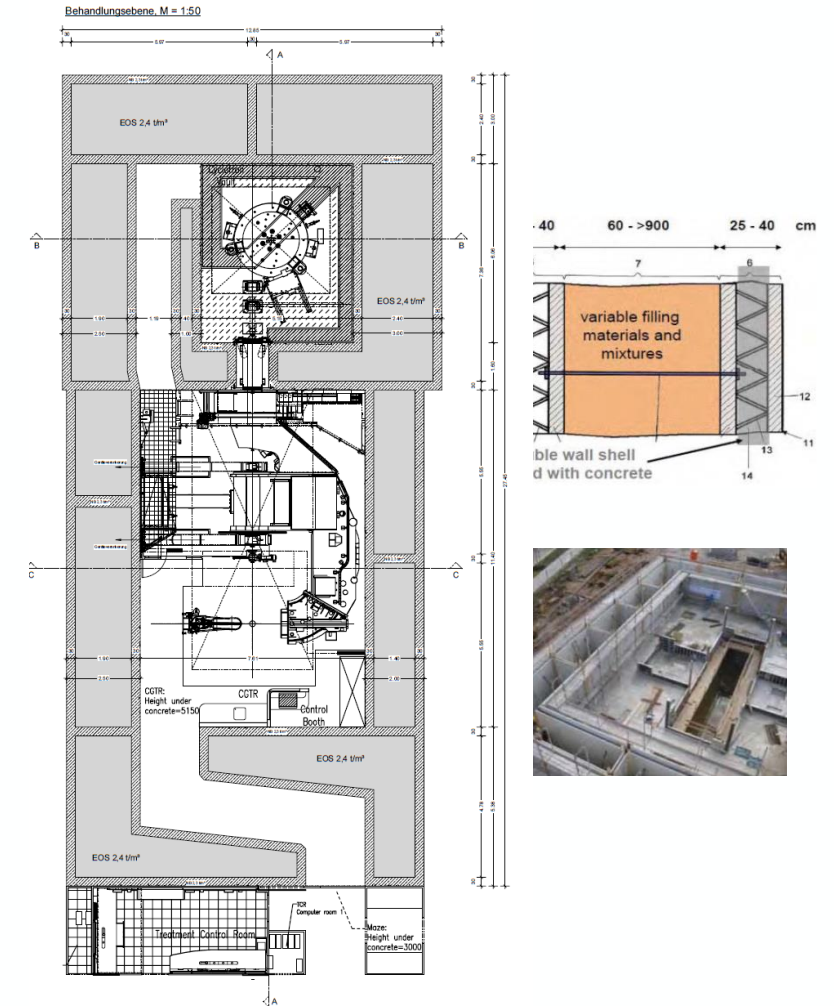
- ✓ FDA cleared
- ✓ CE marked
- ✓ Treating patients in 2 sites
- ✓ Shonin filed in Japan



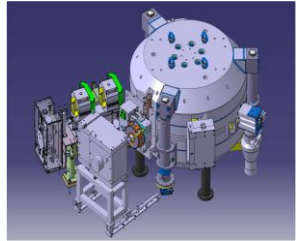
Turnkey Building Solution



- **RISK FREE** : Proven Method and Verified Design
- **FASTER** : 4 – 6 months gain on construction
- **ENVIRONMENTALLY FRIENDLY** : Low activation



Maximum system availability guaranteed



Reliability Design

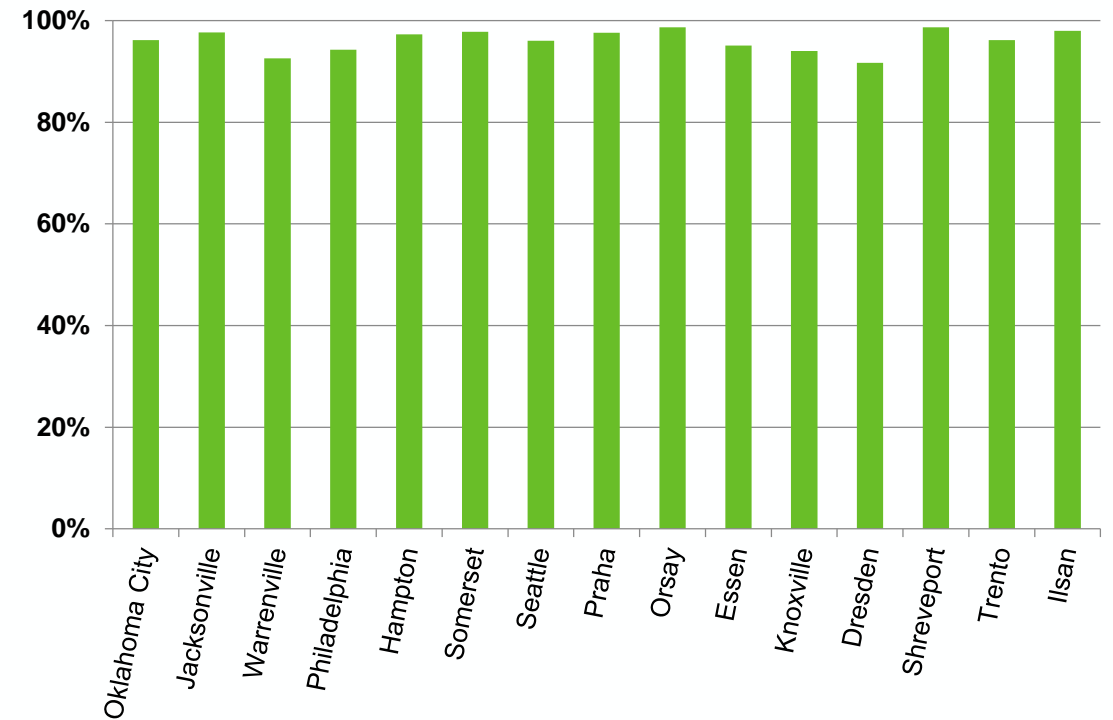


Certified PT Experts



Remote Maintenance

■ 2015 Availability Uptime above 98%

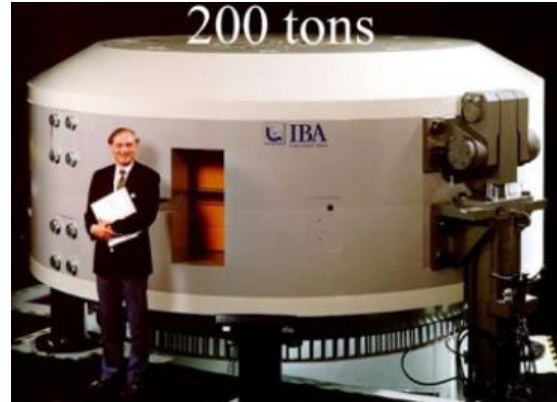


What's next

Being ready for a next potential move !



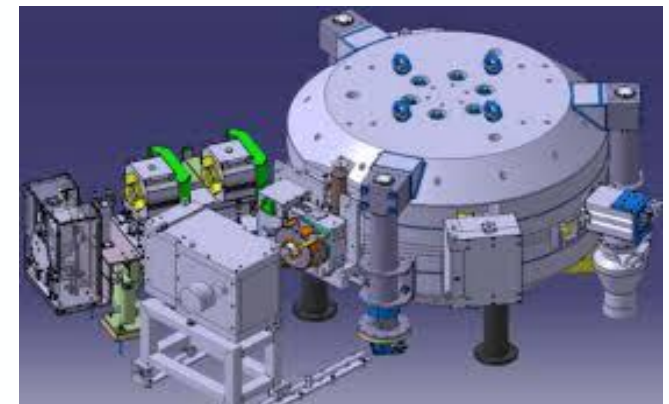
40 years



20 years



??? years



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ENHANCE +
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IBA Dosimetry at a Glance

Frédéric Genin (Chief Marketing Officer Proton Therapy) |
communication@iba-group.com



Online Treatment Monitoring (Linac)



1

Online Measurement

2

Instant Verification

3

3D Patient Dose Analysis

From System Installation to Patient QA



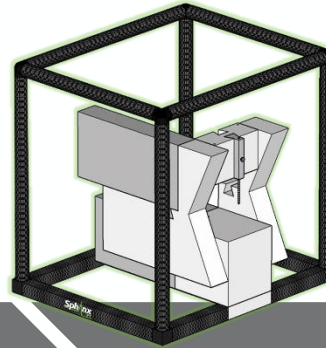
Blue Phantom²



Lynx^{PT}



Sph^{nx}_{PT}



MatriXX^{PT}



Installation

Commissioning

Machine QA

Patient QA



Stingray



Zebra



Giraffe



DigiPhant^{PT}

From System Installation to Patient QA

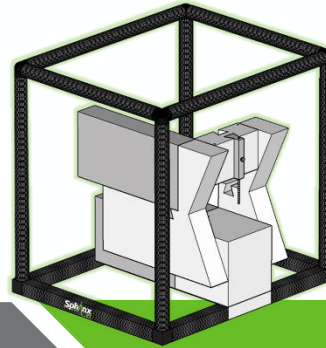
Blue Phantom²



Lynx^{PT}



Sph^{nx}^{PT}



MatriXX^{PT}



Installation

Commissioning

Machine QA

Patient QA



Stingray



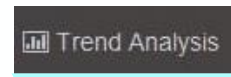
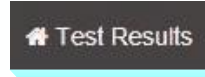
Zebra



Giraffe



DigiPhant^{PT}



90% ✓ 05% ⚠ 05% ✗

- ✗ Linac 1
- ✗ Task Daily
- ✓ Task Weekly
- ✓ Task Monthly
- ✓ Task Yearly
- ✓ Linac 2
- ✓ Linac 3
- ✓ Linac 4

myQA Cockpit

Test Results Trend Analysis Login

Linac | TG-142 | Task Daily

90% ✓ 05% ⚠ 05% ✗

Patients

▼ Dosimetry

| Test Name | Executed User | Date | Status |
|-------------------------|-----------------|------------------|--------|
| ▶ Dose Output Constancy | Christian Goehl | 26.05.2014 09:22 | failed |

▼ Mechanical

| Test Name | Executed User | Date | Status |
|--|---------------|------------------|--------|
| Laser Localization | Can Kayacan | 26.05.2014 09:22 | passed |
| Optical Distance Indicator (ODI) @ iso | Can Kayacan | 26.05.2014 09:22 | failed |
| Collimator Size Indicator | Can Kayacan | 26.05.2014 09:22 | passed |
| Light / Radiation Field Coincidence | Can Kayacan | 26.05.2014 09:22 | passed |
| Light / Radiation Field Coincidence (Asymmetric) | Can Kayacan | 26.05.2014 09:22 | passed |
| Gantry / Collimator Angle Indicators | Can Kayacan | 26.05.2014 09:22 | passed |
| Jaw Position Indicators (Symmetric) | Can Kayacan | 26.05.2014 09:22 | passed |

▶ Safety

▶ MLC

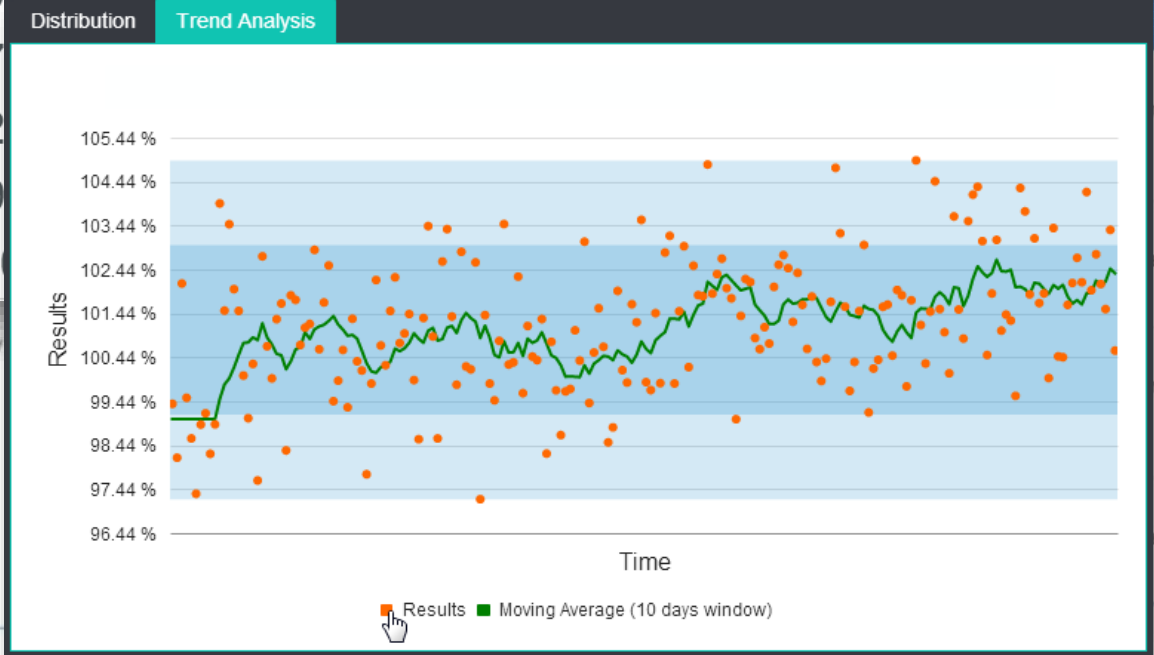
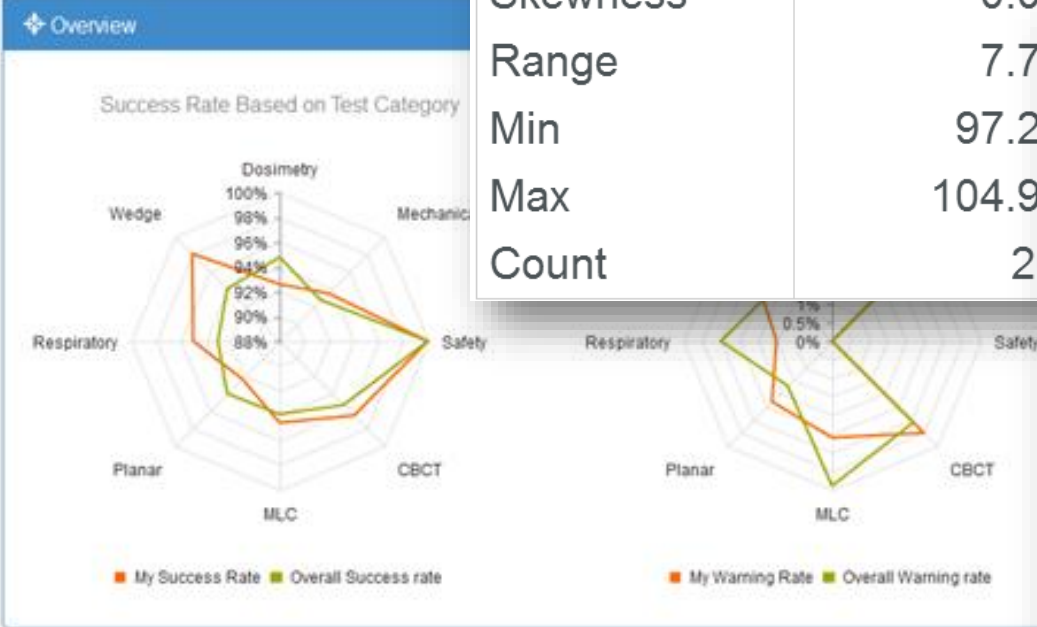
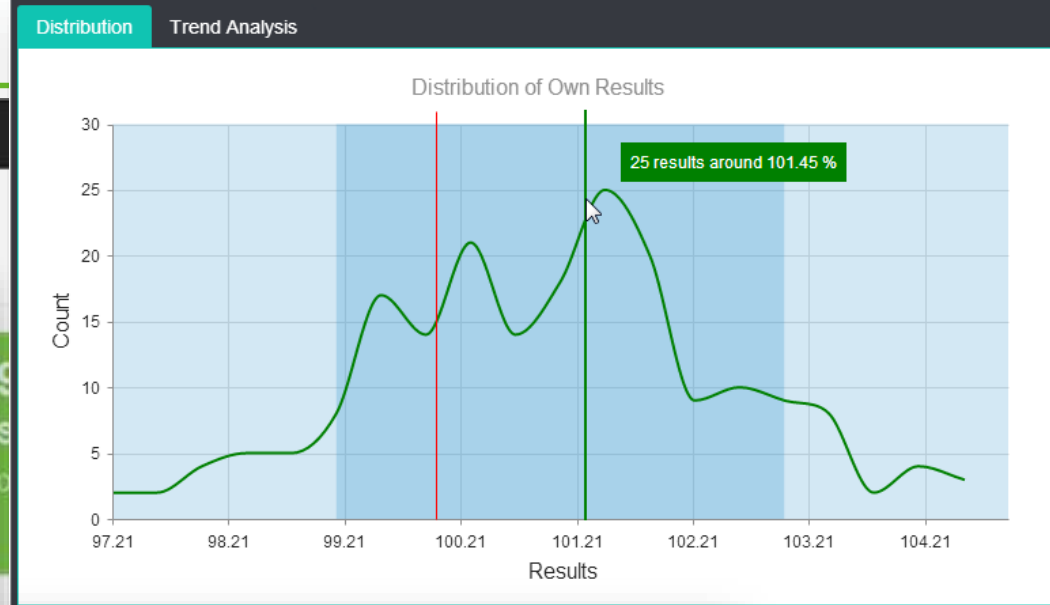


- Status
- passed
 - failed
 - passed
 - passed
 - passed
 - passed
 - passed

My MQA Cloud Portal

17 SITES

| Statistics | Own Results | Overall Results |
|------------|-------------|-----------------|
| Mean | 101.18 % | 99.98 % |
| StdDev | 1.54 % | 1.50 % |
| Variance | 2.38 % | 2.25 % |
| Median | 101.29 % | 100.00 % |
| Skewness | 0.00 | 0.00 |
| Range | 7.7 | |
| Min | 97.2 | |
| Max | 104.9 | |
| Count | 2 | |



monitor and get enhanced statistics
 Tuesday, July 8, 2014 7:10 AM
 tions.
 Tuesday, July 8, 2014 7:10 AM
 monitor and get enhanced statistics
 Tuesday, July 8, 2014 7:10 AM
 tions.
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IBA North America

Capital Markets Day, ASTRO 2016

Beth Klein (President, North America PT) |
beth.klein@iba-group.com



IBA Proton Therapy North America



All Proton Therapy Activities co-located in Reston :

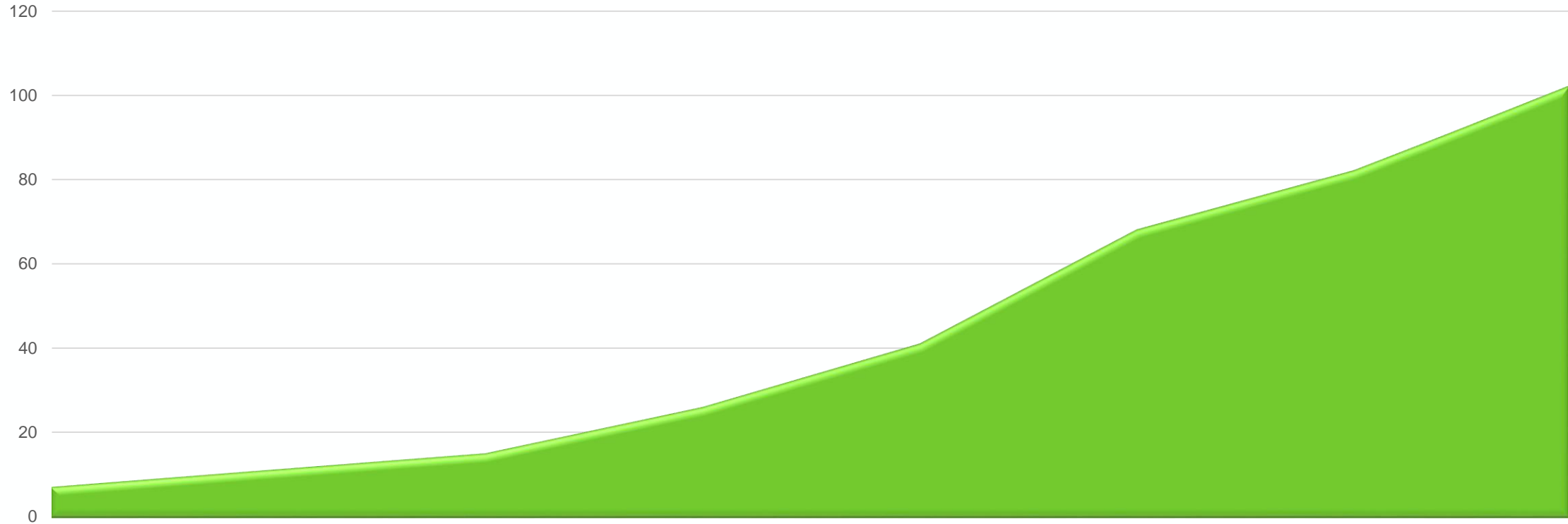
- Sales, Marketing, Sales Support, Product Specialists
- Project management, Install Teams
- Service Delivery, Operations
- Installed Base Upgrades
- EHS, Legal, Information Technology
- Finance
- Research and Development

>300 PT Experts focused on serving our customers better and faster !

Projected PT Market Growth/Opportunity N. America



PT Rooms Sold 1996-2016



How can we accelerate to
MAX POTENTIAL?

ACCELERATORS

- Competition fueling demand (fear of losing share)
 - Turf war is on - defensive & offensive strategies
 - Fear of losing patients/revenue > fear of PT investment
- Prestige driving academic institutions
 - Need PT to attract & maintain top academic staff
 - PT becoming a "Must-Have" for a complete residency program
 - PT Research becoming the "new thing"
- Reduction in barriers to entry
 - Increased indications/throughput due to PBS and CBCT
 - Affordable - compact systems
 - Access to capital easing-up
 - Linac-like workflow

BRAKES

- Reimbursement
 - Election year anxiety
 - Value Paradigm/MACR impact?
 - Private Payers not paying; no prostate
- TCO (Total cost of Ownership) High
 - Price pressure on equip, svc, terms
 - Competing projects
- Clinical demand/Market awareness still low
 - Quantification of PT value needed



IBA NAM PT Market Share Snapshot 2016

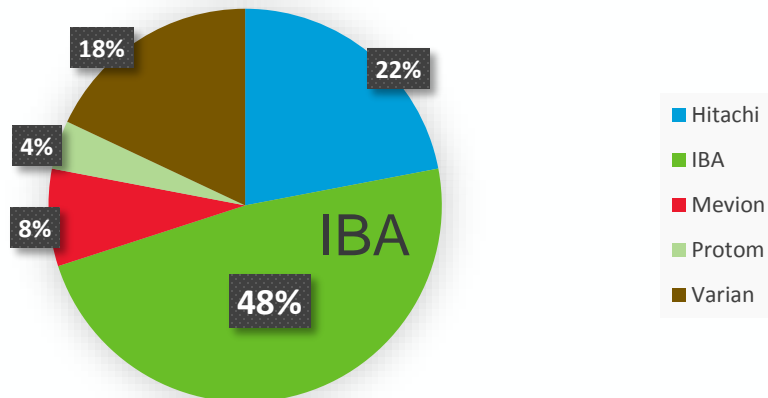


| | Facilities | Market share | Rooms | Market share | Single room facilities | Rooms in multi room facilities |
|---------|------------|--------------|-------|--------------|------------------------|--------------------------------|
| IBA | 14 | 44% | 44 | 48% | 3 | 41 |
| Hitachi | 5 | 16% | 20 | 22% | 0 | 20 |
| Mevion | 7 | 22% | 7 | 8% | 7 | 0 |
| Protom | 2 | 6% | 4 | 4% | 1 | 3 |
| Varian | 4 | 12% | 16 | 18% | 0 | 16 |
| | 32 | | 91 | | | |

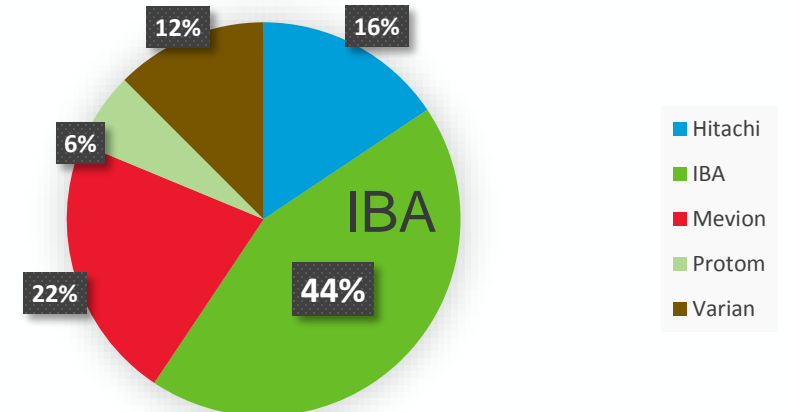
Includes

- Installed Base
- Under installation
- Firm orders

Number of rooms US

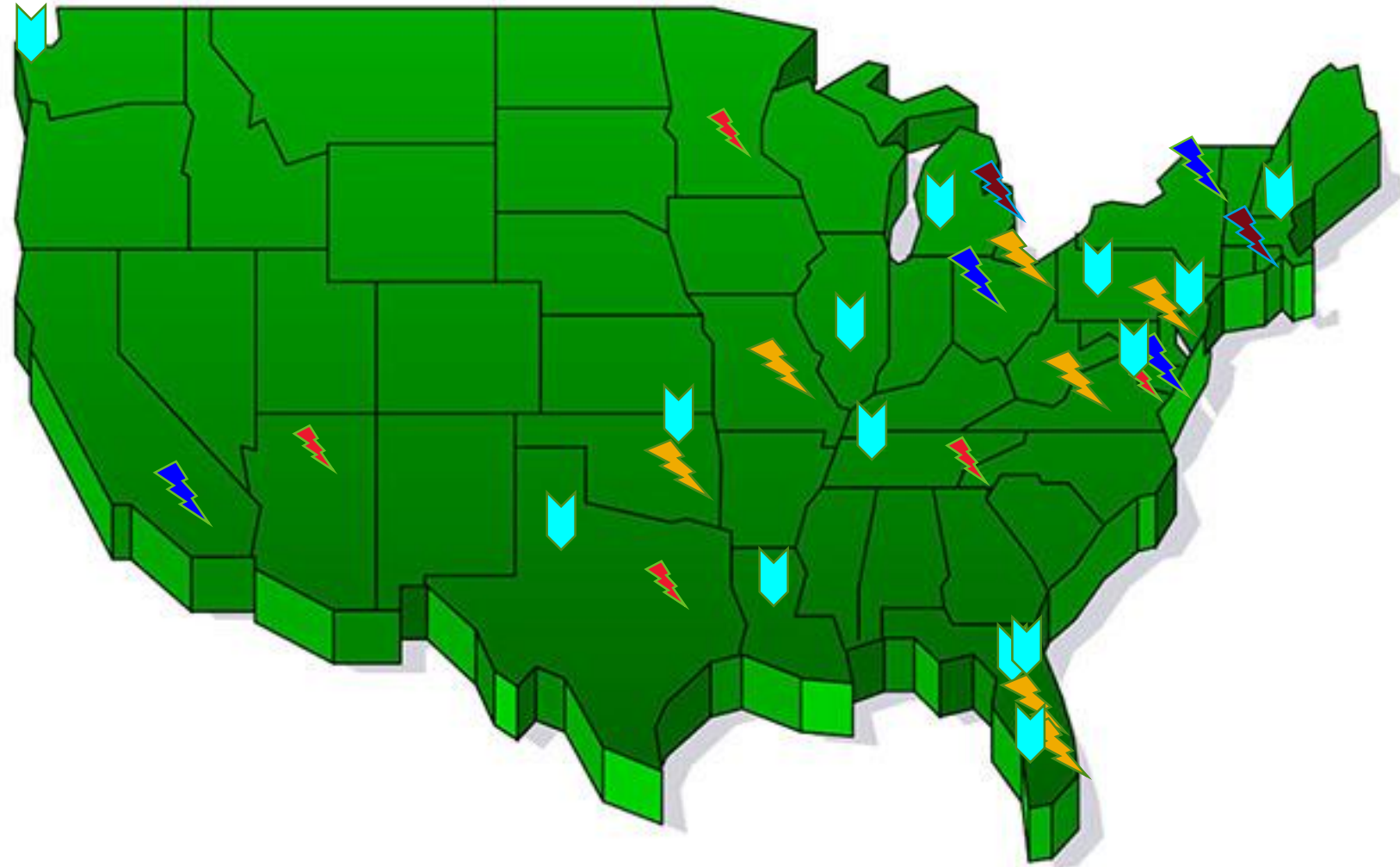


Number of centers US

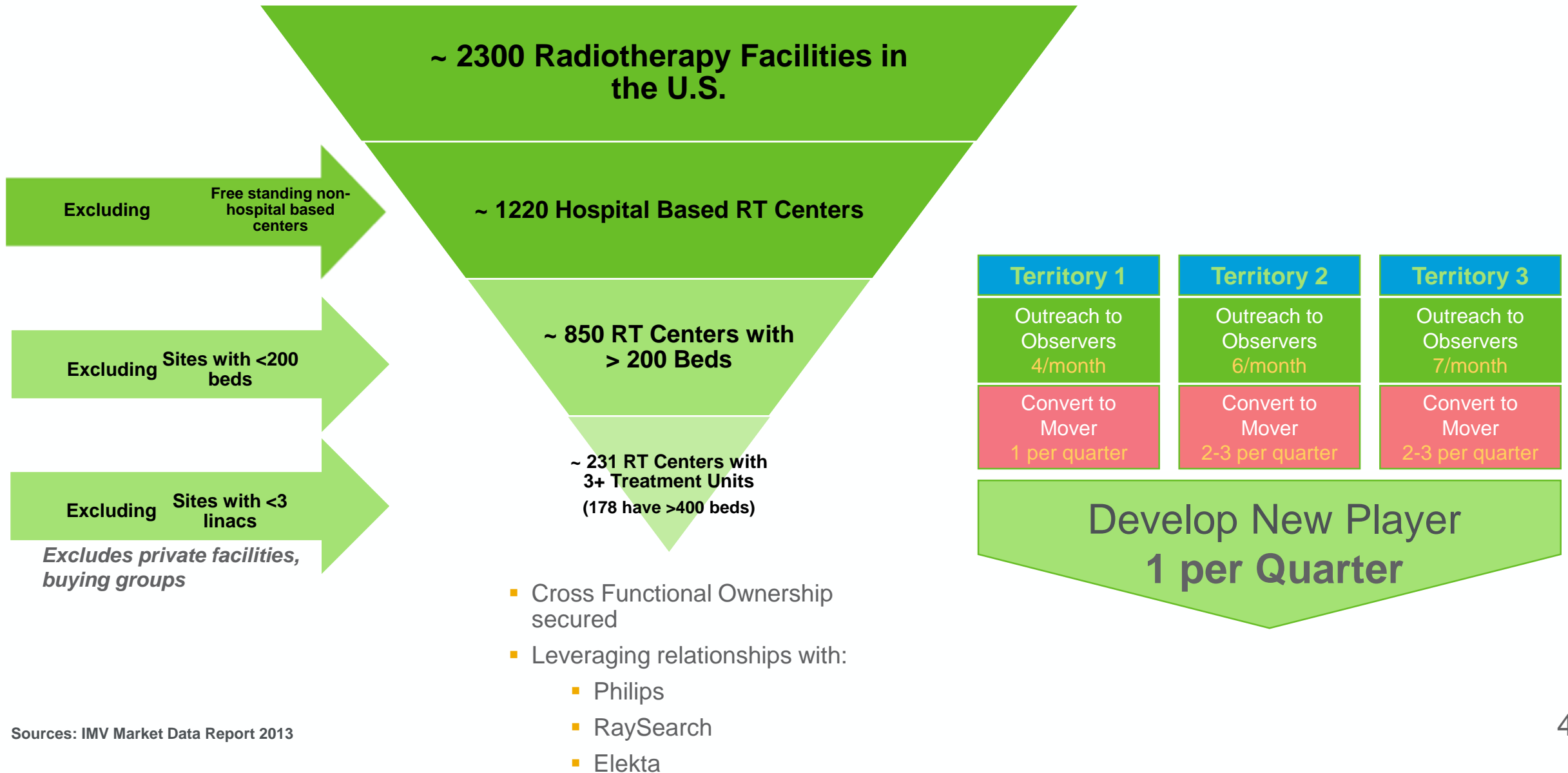


Proton Therapy Installed Base North America

-  IBA (14)
-  Mevion (7)
-  Varian (4)
-  Hitachi (5)
-  Protom (2)



IBA NAM PT Top-Down Account Segmentation



Why is IBA successful in PT in North America?

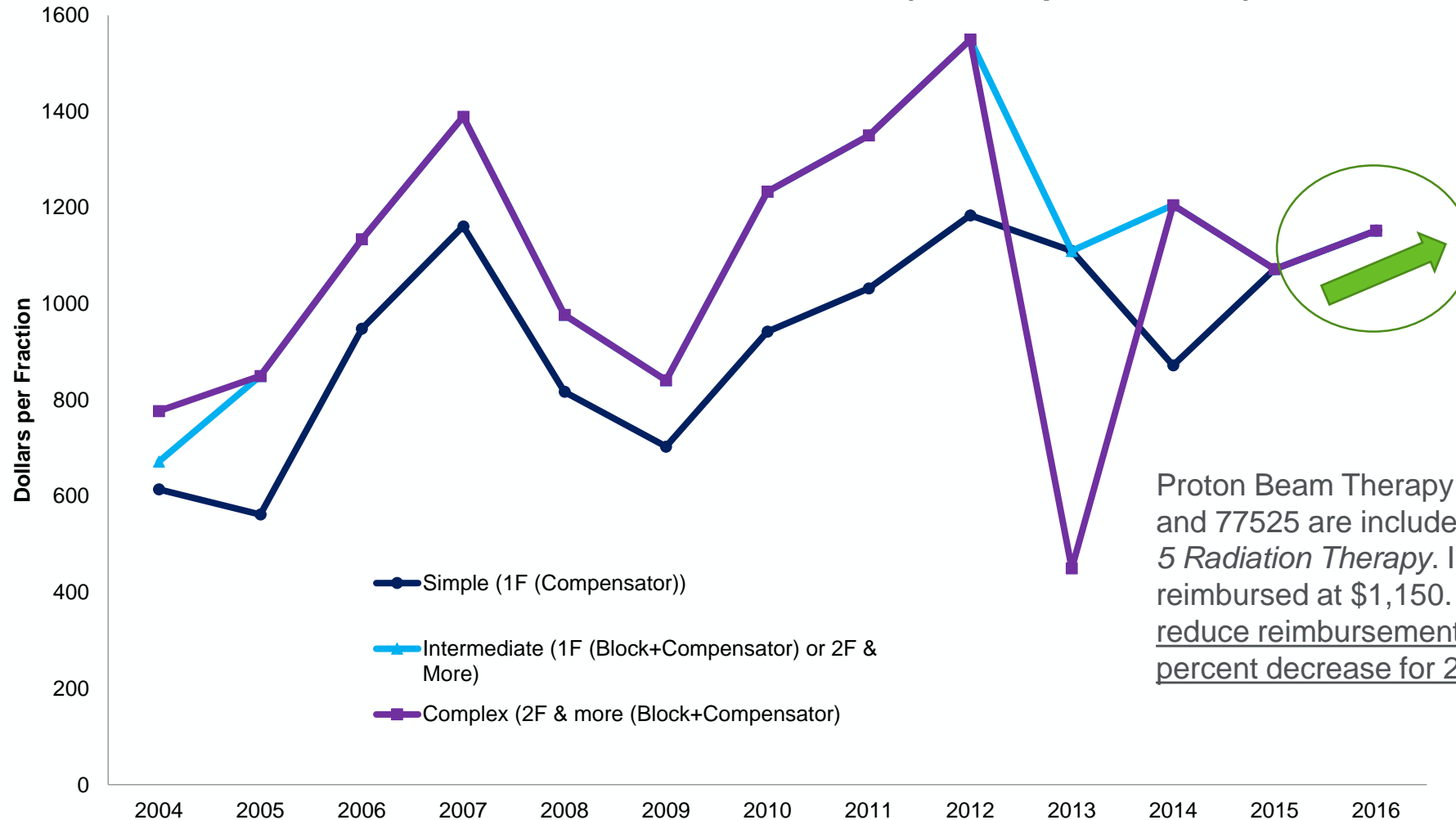


1. Experience: 30 years dedicated to PT – Success from Start to Finish
2. NO Obsolescence: proven upgradeability path
3. Execution: 12 months installation – guaranteed
4. Training: comprehensive training program
5. Uptime: demonstrated and proven (97%)
6. Stability: profitable and growing (270M Euro, ~ 11% REBIT*, ~ 11% R&D)
7. Financing: flexible financial options



Reimbursement Trend Supporting PT Development

Medicare Reimbursement Rate Evolution (Dollars per Fraction)



Proton Beam Therapy codes 77522, 77523 and 77525 are included in APC 5625 *Level 5 Radiation Therapy*. In 2016, the APC was reimbursed at \$1,150. CMS is proposing to reduce reimbursement to \$1,116, a 3 percent decrease for 2017.

Shift to Value Based Paradigm also supports PT



What is it?

- Shift in Payment from Fee-for-Service Model to Value Based Payment
- Value is defined by Quality/Cost
- Quality is being defined between providers and CMS
- MACR alignment with CMS is key to Congress vote to go forward

Why is this significant for PT?

- PT has a higher value for a number of patients than RT for many indications based upon quality factors:
 - Less cost of side effects
 - Less cost of radiation induced complications over patient life
 - Longer life

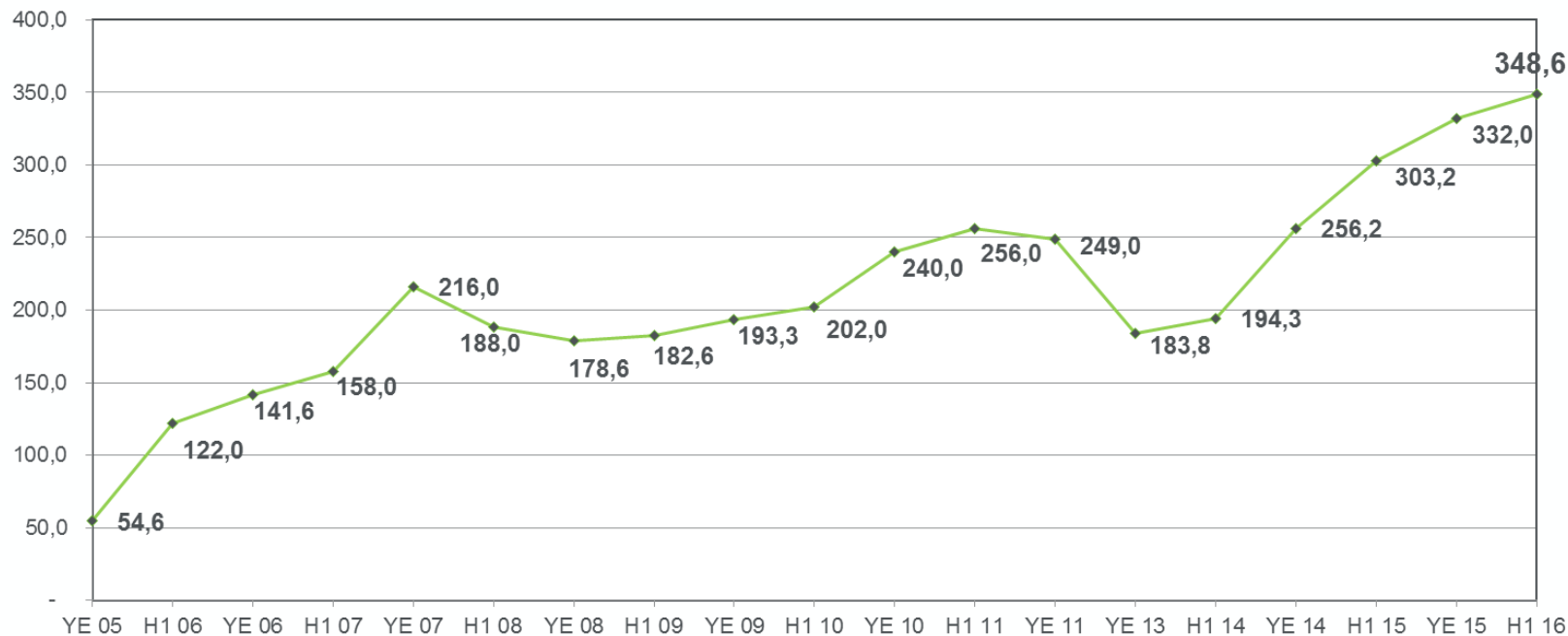
What is IBA doing to impact/influence this?

- Contracted with mega data analytics company (focus on oncology solutions) to extrapolate life cycle cost of PT vs RT patients using CMS SEER and TRUVEN data; >1M patients
- CMS connections to ensure that patient analytics are being

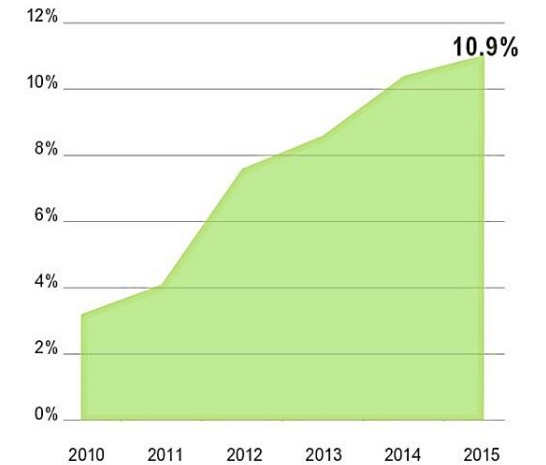
FINANCIALS AND GUIDANCE

Key financials

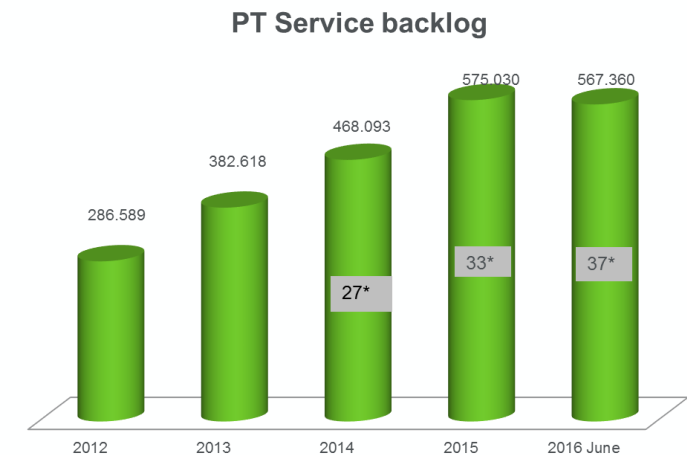
- 2015 sales: EUR 270 million (+ 22.6%) ; H1 16: +19,9% ;
- REBIT margin 2015 : 10.9% ; H1 16: +20,0%
- Backlog of EUR 349 million end H1 16 (+15% vs H1 15).



Equipment backlog



REBIT / Sales and services trends



* Number of Service Contracts

- **Based on the following elements at H1 2016 :**
 - PT & Other Accelerators equipment backlog of EUR 349 million
 - PT & Other Accelerators service backlog of EUR 567 million, representing 37 signed contracts of 10 years on average
 - Dosimetry backlog of EUR 18.3 million
 - Clear production and installation schedule for 22 PT projects offering high visibility
 - > EUR 1 billion strong & growing PT pipeline of which 70% Proteus®ONE where IBA has a unique competitive position

- **Top line guidance confirmed :**
 - “above 20%” top line growth in 2016 despite slow year for Dosimetry
 - Double-digit revenue growth expected for foreseeable future

- **REBIT guidance confirmed :**
 - About 11% in 2016
 - 13 to 15% by 2018

- **Guidance supported by the balance between :**
 - Economies of scale/operational leverage
 - Growing importance of Services
 - Price erosion
 - Investment in scaling up company production capacity and marketing infrastructure
 - Investment in R&D to maintain market leadership

- **Dividend: target 30% dividend payout confirmed**

Q&A

PROTECT +
ENHANCE +
SAVE LIVES

"Thank you."

